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Development of an Intervention for Soldiers and Veterans with Co-Occurring Traumatic Brain Injury and Substance Abuse Disorders

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14. ABSTRACT Within the last year, a group of experts convened to evaluate the literature base in substance abuse (SA) and traumatic brain injury (TBI). The group has met on a monthly to bi-monthly basis synthesizing findings and conceptualizing a treatment approach for individuals with co-occurring mild TBI (mTBI) and substance use disorders (SUDs). Existing theoretical models, treatment approaches, and intervention strategies have been identified for best practices and evidence-base, and are currently being modified or incorporated into the current treatment. Treatment manualization is underway providing information on theoretical tenets and projected treatment goals, treatment modality (e.g., group-based), session-by-session curriculum, techniques/exercises and intended session outcomes. Formatting and content feedback from a non-expert panel of individuals is currently being sought. Revisions based on expert and non-expert feedback will be incorporated in the next quarter, with a final manual complete and available for further feasibility study by the end of the approved funding period. The project is in line with the proposed statement of work and is considered to be on target with regard to tasks, outcomes and resultant products.				
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Introduction

Civilian research regarding SA treatment for those with TBI has been limited. Moreover, to date no studies have been identified regarding SA treatment among Soldiers/veterans with TBI and co-occurring substance misuse/abuse. Given the number of Soldiers in the current conflicts who have sustained TBIs and also are at risk for SA disorders, it is critical and timely to develop and disseminate treatment that will support a return to healthy life functioning and full participation in society. Thus, the intention of this project is to design a novel SA intervention and related treatment manual and educational materials for individuals who served in the military and have co-occurring mild TBI and SA.

Body

The following section details the tasks and accomplishments associated with those tasks as initially outlined in the approved Statement of Work.

Specific Aim 1 – Convene a group of experts in SA and/or TBI, military culture and post-deployment needs, and treatment development, for the purpose of synthesizing findings, and conceptualizing the treatment approach for SA.

Task 1 – Convene an interdisciplinary panel with individual expertise in TBI, SA, military culture, and treatment development, for a combined proficiency in all areas.

Subtask 1 – Review seminal articles in TBI, SA, military culture, treatment development, and Soldier support resources (i.e., Battlemind).

Accomplishments- An interdisciplinary panel with the above mentioned areas of expertise convened in January 2010 (after funding from the grant source officially had been received by the Denver Research Institute).

The expert panel reviewed relevant seminal literature to identify the evidence base, best practices, and potentially efficacious models and modalities for treatment of co-occurring mild TBI and SA disorders.

Task 2 – After background information is established, utilize combined expertise to identify evidence-based SA interventions that could be of use to this population and discuss application to the treatment development.

Subtask 1 – Identify and discuss existing interventions for SA in a TBI population including *Motivational Interviewing* (MI) and the *Substance Abuse Brain Injury Toolbox* (SABIT), and the innovative application of this information as it relates to treatment for Soldiers and veterans with TBI+SA.

Accomplishments- Monthly to bi-monthly conference phone calls with the expert panel were conducted to identify theoretical and treatment approaches best suited for this population. These approaches emphasized MI, brief motivational enhancement therapy (MET), group MI, relapse prevention and TBI psychoeducation. Review of best practices for returning Soldiers and post-deployed military personnel and Veterans was completed

Task 3 – Synthesize findings and conceptualize the TBI+SA treatment approach.

Subtask 1 – Create an outline in which the synthesis/conceptualization of the impact of TBI + SA on treatment is presented and develop basis for intervention.

Accomplishments- The basis for intervention was identified via brief MI/MET, an existing TBI treatment manual, risk reduction models and relapse prevention. Such conceptualization served as a basis for initial development of the curriculum.

Subtask 2 – Develop/write a full curriculum for the intervention and obtain feedback from SA and TBI non-panel experts, and from community stakeholder.

Accomplishments- The treatment modality for this intervention will be a 12-week group. As described above, the theoretical approach and evidence-based treatment strategies best suited for use in this intervention model have been identified. Specific techniques and exercises are currently being developed in line with session themes and goals. The curriculum is currently being developed and consists of a grouping of three to four sessions aimed towards increasing motivation to change, then towards risk reduction, ending with relapse/TBI prevention.

Feedback from non-expert individuals is currently being sought.

Specific Aim 3 - Develop a manual and educational material for clinicians based on the newly identified and created treatment intervention and elicit feedback from non-panel resources.

Task 1 – Complete manual and educational materials based on the philosophy, framework, and content of the identified relevant methods used in MI and the SABIT

Subtask 1 – Write the materials incorporating the final topic areas/curriculum and obtain input from non-panel consultants as identified above.

Subtask 2 – Send written materials to and obtain a preliminary version of the manual from a graphic designer hired to design the manual.

Subtask 3- Elicit final feedback from non-panel consultants as identified above.

Subtask 4 – Edit and revise

Subtask 5- Send revised version of manual to graphic designer for design of final product

Accomplishments- The manual is currently being written and reviewed by the panel and non-panel experts. Within the next quarter, revisions will be completed and the manual contents will be submitted to the identified graphic designer to begin design and production. A mock copy will be presented to the experts for final feedback. Final revisions will be made and sent to production. The end result will be a manual and educational material ready for use in the subsequent pilot study.

Specific Aim 4 – Disseminate information regarding the expert panel consensus on the development of a novel treatment for Soldiers and veterans with TBI and SA disorders to other professionals.

Task 1 – Submit a manuscript for publication in a professional journal.

Subtask 1 – Present the information at a meeting(s) or professional conference.

Accomplishments- As this project is currently underway and the manual is not yet complete, dissemination of the product has not been completed. In the final quarter of this project, a manuscript regarding the findings from the expert panel consensus and subsequent basis for the development of this intervention will be written.

Information about the process of this intervention development project has been provided at one professional conference thus far in September 2010(MIRECC 3rd Annual Traumatic Brain Injury & Suicide Prevention Conference: The Impact of Substance Abuse). As development nears completion, presentation to local and national audiences will be conducted.

Specific Aim 5 – Design a study to evaluate intervention and manual.

Task 1 – Write a grant proposal to perform test the feasibility of the intervention program that is developed
Subtask 1- Identify appropriate funding mechanism.

Subtask 2 – Develop study protocol

Subtask 3 – Prepare a grant proposal to test the feasibility of this intervention.

Task 2 – Submit proposal to funding source.

Accomplishments- A grant proposal outlining a proposed method of evaluating the feasibility of the not-yet-developed intervention was written and submitted in 2009 to CDMRP for an Investigator Initiated Award, in an attempt to receive funding for further study of this intervention. This submission did not result in an award; however, it did provide relevant feedback that will be incorporated in a second submission. As the intervention itself had not been identified nor fully developed at the time of the submission, it was not expected that the team would receive funding. However, in an effort to seamlessly transition from the current project to a funded pilot project, the team determined it was necessary to submit. That submission does not preclude Aim 5 and associated tasks. It is expected that specific aim 5 will be addressed within the final quarter of this project.

Key Research Accomplishments

- Expert panel identified and convened to review seminal literature
- Evidence based treatment and best practices were identified and incorporated into current treatment approach
- Panel experts convened on a regular basis to discuss progress on the manual (theoretical basis, intended outcomes, treatment strategies, and curriculum)
- Non-panel experts were identified and are reviewing current version of the treatment manual
- Brief presentation regarding the importance of and process of developing an intervention for Soldiers and Veterans with comorbid mTBI and SUDs was given by the PI at an annual TBI and Suicide conference
- A grant proposal was submitted to CDMRP; although funding was not granted, feedback from the submission will be useful in subsequent submissions for pilot/feasibility testing

Reportable outcomes

Presentation (see appendix)

Conclusion

To date the completed research is in line with the approved statement of work (SOW). Within the last year, this research has led to: 1) a synthesis of the literature base on TBI and SUDs, 2) determination regarding best practices and evidence based treatment approaches for use with Soldiers and Veterans. 3) initial development of curriculum and manualized treatment, 4) preliminary presentation of the intervention development process at a conference of clinicians and researchers, 5) grant submission. It is expected that continued work on this research will be consistent with the approved SOW.

References

N/A

Appendices

N/A